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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,056	07/25/2001	Masayoshi Kobayashi	P/2291-102	6082

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EXAMINER

PHILLIPS, HASSAN A

ART UNIT PAPER NUMBER

2151

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/915,056

Applicant(s)

KOBAYASHI, MASAYOSHI

Examiner

Hassan Phillips

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6,7,10,11 and 14-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,4,6,7,10,11,28-31,35-42,45,46,48,49 and 62-64 is/are allowed.
- 6) ☒ Claim(s) 14-27,32-34,43,44,47,50,52,54,56,58 and 60 is/are rejected.
- 7) ☒ Claim(s) 51,53,55,57,59 and 61 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/17/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to amendments and remarks filed on April 8, 2005.

Claim Objections

2. Claim 14 is objected to because of the following informalities: commas should be placed after "priority given to a packet" in line 6, and "cooperating operation" in line 8 of the claim. Appropriate correction is required.

Response to Arguments

3. Applicant's arguments filed April 8, 2005 have been fully considered but they are not persuasive. Applicant argued that: neither AAPA, or Fukushima, alone or in combination, show or suggest how priority is assigned to packets and giving a lower priority to automatic cache updating operations, a link prefetching operations, and a cache server cooperating operations than is given to normal cache communication packets. Examiner respectfully disagrees.

Regarding Applicant's arguments, Examiner submits that assigning priority to packets was well known in the art at the time of the claimed invention. Furthermore, giving a lower priority to one operation over another is a field of use limitation and not patentable distinction. Nevertheless, AAPA teaches it was well known in the art for network systems to include at least one cache server comprising: at least one of an automatic cache updating section, a link prefetching control section, and a cache server cooperating section, which carries out respective ones of the automatic cache updating

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operation, the link prefetching operation, and the cache server cooperating operation, (see page 4, lines 12-19). Fukushima teaches a priority controllable router that receives packets with headers comprised of priority information indicating a priority required by a terminal of transmission device, (col. 5, lines 24-39). Given the teachings of Fukushima, it would have been obvious to one of ordinary skill in the art to modify the teachings of the AAPA in order to show at least one priority controllable router capable of controlling a priority of transmitting a packet to a link, based on priority information added to the packet, and allowing priority given to a packet, to be used for communications generated by at least one of the automatic cache updating operation, the link prefetching operation, and the cache server cooperating operation, to be lower than a priority given to a packet to be used for communications generated by a cache operation, in order to provide a better QOS for the network system, col. 2, and lines 7-21 .

Furthermore, the Examiner has interpreted the claim language as broadly as possible. It is also the Examiner's position that Applicant has not yet submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in a manner that distinguishes over the prior art.

Failure for Applicant to significantly narrow definition/scope of the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims with scope parallel to the Applicant in the response and reiterated the need for Applicant to define the claimed invention more clearly and distinctly.

Accordingly the references supplied by the examiner in the previous office action covers the claimed limitations. The rejections are thus sustained. Applicant is requested to review the prior art of record for further consideration.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 14, 15, 32, 33, 43, 47, are rejected under 35 U.S.C. 103(a) as being unpatentable over the AAPA in view of Fukushima et al. (hereinafter Fukushima) U.S. Patent 6,292,489.

6. In considering claims 14, 32, 43, and 47, the AAPA teaches it is well known in the art for network systems to include at least one cache server comprising:

At least one of an automatic cache updating section, a link prefetching control section, and a cache server cooperating section, which carries out respective ones of the automatic cache updating operation, the link prefetching operation, and the cache server cooperating operation. See page 4, lines 12-19.

Although the AAPA shows substantial features of the claimed invention, it fails to show: A priority controllable router.

Nevertheless, in a similar field of endeavor, Fukushima teaches a network system comprising: A priority controllable router 1, capable of controlling a priority of transmitting a packet to a link, based on priority information added to the packet. See col. 5, lines 24-39.

Given the teachings of Fukushima, it would have been obvious to one of ordinary skill in the art to modify the teachings of the AAPA in order to show at least one priority controllable router capable of controlling a priority of transmitting a packet to a link, based on priority information added to the packet, and allowing priority given to a packet to be used for communications generated by at least one of the automatic cache updating operation, the link prefetching operation, and the cache server cooperating operation to be lower than a priority given to a packet to be used for communications generated by a cache operation. This would have provided a better QoS for the network system, col. 2, and lines 7-21.

7. In considering claims 15 and 33, Fukushima provides a means for a priority providing section for providing a priority request source with a priority predetermined for each priority request source, when a request for providing a priority occurs; and, a priority information adding section for adding priority information showing a priority to a packet. See col. 5, lines 24-39. One of ordinary skill in the art would combine the teachings of Fukushima with the AAPA to have a cache operating section, link prefetching control section, automatic cache updating section, and cache server cooperating section, request the priority providing section to provide a priority when a

transmission packet has occurred, and pass the transmission packet and the priority provided by the priority providing section to the priority information adding section for the same reasons indicated in consideration of claims 14 and 32.

8. Claims 16-27, 34, 44, 50, 52, 54, 56, 58, 60, are rejected under 35 U.S.C. 103(a) as being unpatentable over the AAPA in view of Fukushima, and further in view of Harada.

9. In considering claim 16, although the teachings of the AAPA and Fukushima show substantial features of the claimed invention, they fail to show: A quality-of-service (QoS) path information.

Nevertheless, in a similar field of endeavor, Harada teaches an apparatus in a packet-switched communications network, which comprises: A QoS path information obtaining section for obtaining QoS path information including network path information and path load information. See col. 3, lines 40-54.

Given the teachings of Harada, it would have been obvious to one of ordinary skill in the art to modify the teachings of the AAPA and Fukushima in order to show utilizing the priority providing section to determine a priority based on a priority-request source and QoS path information obtained by the QoS path information obtaining section, when a request for providing priority has occurred. This would have allowed for stable packet transmission, and effective cache updating, link prefetching, or server

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cooperating operations by choosing and selecting the most efficient routes in the network, Harada, col. 3, lines 23-30.

10. In considering claims 17-27, 34, 44, the AAPA teaches it is well known in the art for network systems to include at least one cache server comprising:

At least one of an automatic cache updating section, a link prefetching control section, and a cache server cooperating section, which carries out respective ones of the automatic cache updating operation, the link prefetching operation, and the cache server cooperating operation. See page 4, lines 12-19.

Although the AAPA shows substantial features of the claimed invention, it fails to show: A priority controllable router.

Nevertheless, in a similar field of endeavor, Fukushima teaches a network system comprising: A priority controllable router 1, capable of controlling a priority of transmitting a packet to a link, based on priority information added to the packet. See col. 5, lines 24-39.

Given the teachings of Fukushima, it would have been obvious to one of ordinary skill in the art to modify the teachings of the AAPA in order to show at least one priority controllable router capable of controlling a priority of transmitting a packet to a link, based on priority information added to the packet, and allowing priority given to a packet used for communications generated by at least one of the automatic cache updating operation, the link prefetching operation, and the cache server cooperating operation to be lower than a priority given to a packet to be used for communications generated by a

cache operation. This would have provided a better QoS for the network system, col. 2, and lines 7-21.

Although the teachings of the AAPA and Fukushima further show substantial features of the claimed invention, they fail to show: A quality-of-service (QoS) path information obtaining section, and a path calculating section.

Nevertheless, in a similar field of endeavor, Harada teaches an apparatus in a packet-switched communications network which comprises: A plurality of path settable routers (SS-1, SS-2, or SS-3) operating a path control protocol to exchange network path information and path load information, relay servers (2, 3, 5, or 6), a QoS path information obtaining section 11 for obtaining QoS path information including network path information and path load information; and, a path calculating section for obtaining a path. See col. 3, lines 40-54.

Given the teachings of Harada, it would have been obvious to one of ordinary skill in the art to modify the teachings of the AAPA and Fukushima in order to show a relay control section for selecting at least one relay server suitable for carrying out at least one of an automatic cache updating operation, a link prefetching operation, and a cache server cooperating operation, based on the QoS path information obtained by the QoS path information obtaining section, and for instructing the selected at least one relay server about data to be relayed, wherein the at least one relay server relays the data according to an instruction from the relay control section. This would have allowed for stable packet transmission and effective cache updating, link prefetching, or server

cooperating operations by choosing and selecting the most efficient routes in the network, Harada, col. 3, lines 23-30.

11. In considering claims 50, 52, 54, 56, 58, 60, the teachings of Harada provide a means for the relay control section to select at least one relay server that is necessary for setting a relay path on which there exists no congestion portion. See col. 3, lines 54-67, and col. 4, lines 1-5. One of ordinary skill in the art would combine the teachings of the AAPA and Fukushima with Harada for the reasons indicated in consideration of claims 22 and 23.

Allowable Subject Matter

12. In light of Applicants amendments and remarks, claims 1, 3, 4, 6, 7, 10, 11, 28-31, 35-42, 45, 46, 48, 49, 62-64 are allowed. The references in the Applicants IDS and the prior art, cited by the Examiner, failed to explicitly teach all the limitations recited in the claims. Specifically, the prior art of record failed to explicitly teach an apparatus or a method that identifies a maximum remaining bandwidth path, identifies a link on the maximum remaining bandwidth path having a minimum remaining bandwidth, and determines whether the minimum remaining bandwidth is not smaller than a predetermined value. The prior art also failed to explicitly teach when it is not possible to set a relay path on which there exists no congestion portion, relaying data to a relay server near to a congestion portion among relay servers that exist upstream from the congestion portion, wherein the data is stored and, when the congestion has

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been relieved, the data is transferred to downstream from the congestion portion.

Furthermore, modifying the prior art to teach all of the limitations recited in the claims would not have been obvious to a person of ordinary skill in the art at the time of the present invention.

13. Claims 51, 53, 55, 57, 59, and 61, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

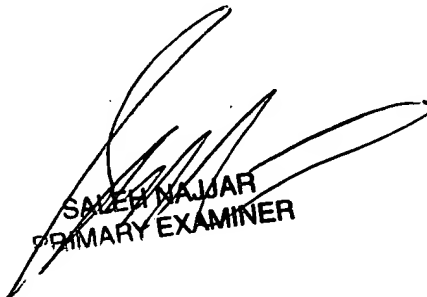
Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hassan Phillips whose telephone number is (571) 272-3940. The examiner can normally be reached on M-F 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571) 272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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6/27/05


SAEED NAJJAR
PRIMARY EXAMINER